TAKING THE GUESSWORK OUT OF COMPUTER DECISIONS

COMRESS, INC. – WASHINGTON, D. C.

Computer Research, Systems and Software

TAKING THE GUESSWORK OUT OF COMPUTER DECISIONS

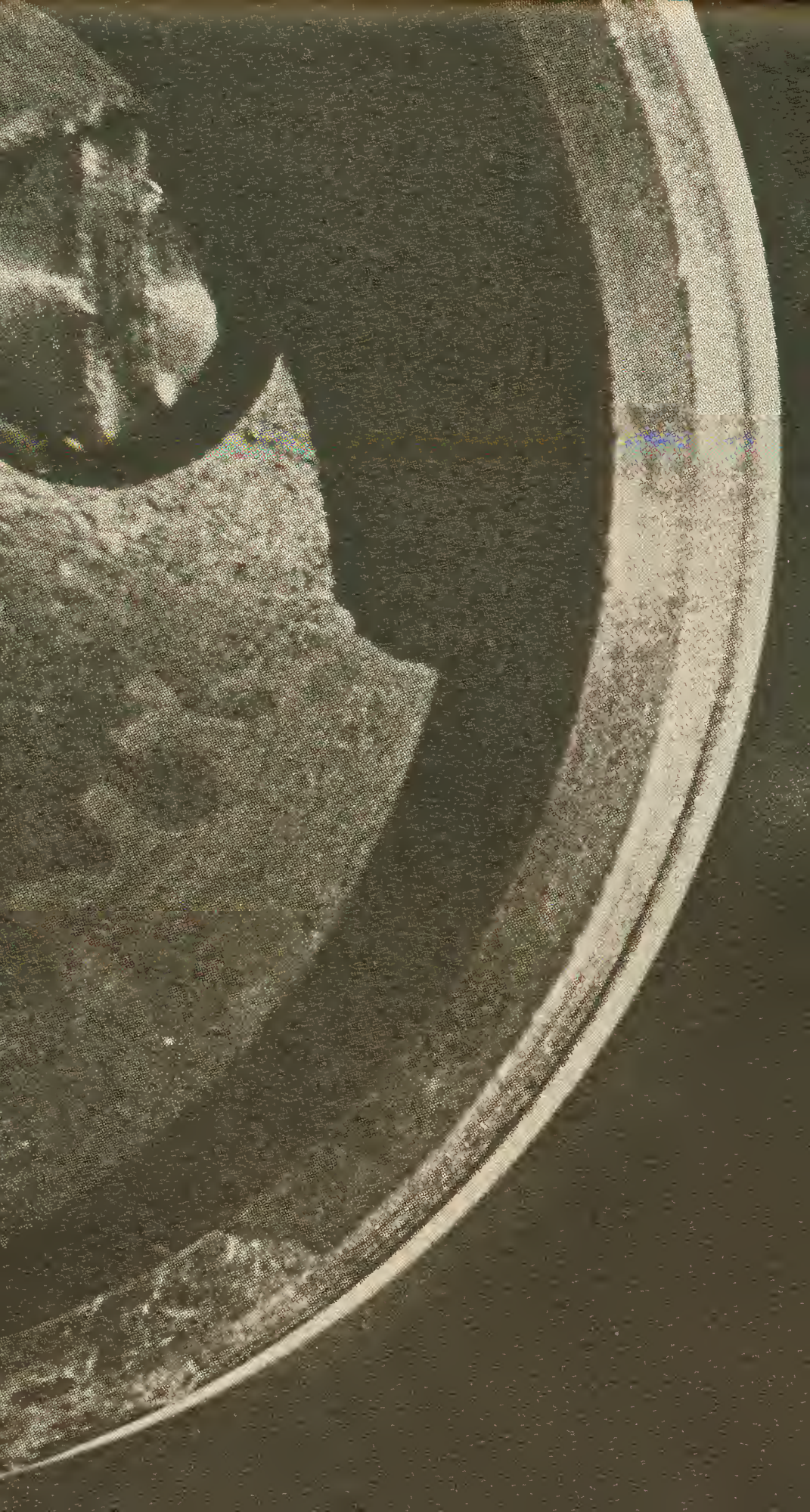
. . . is a pressing problem for modern management. The computer itself has proven to be the greatest tool available to management . . . but within its greatness are complexities involving an infinite variety of difficult decisions.

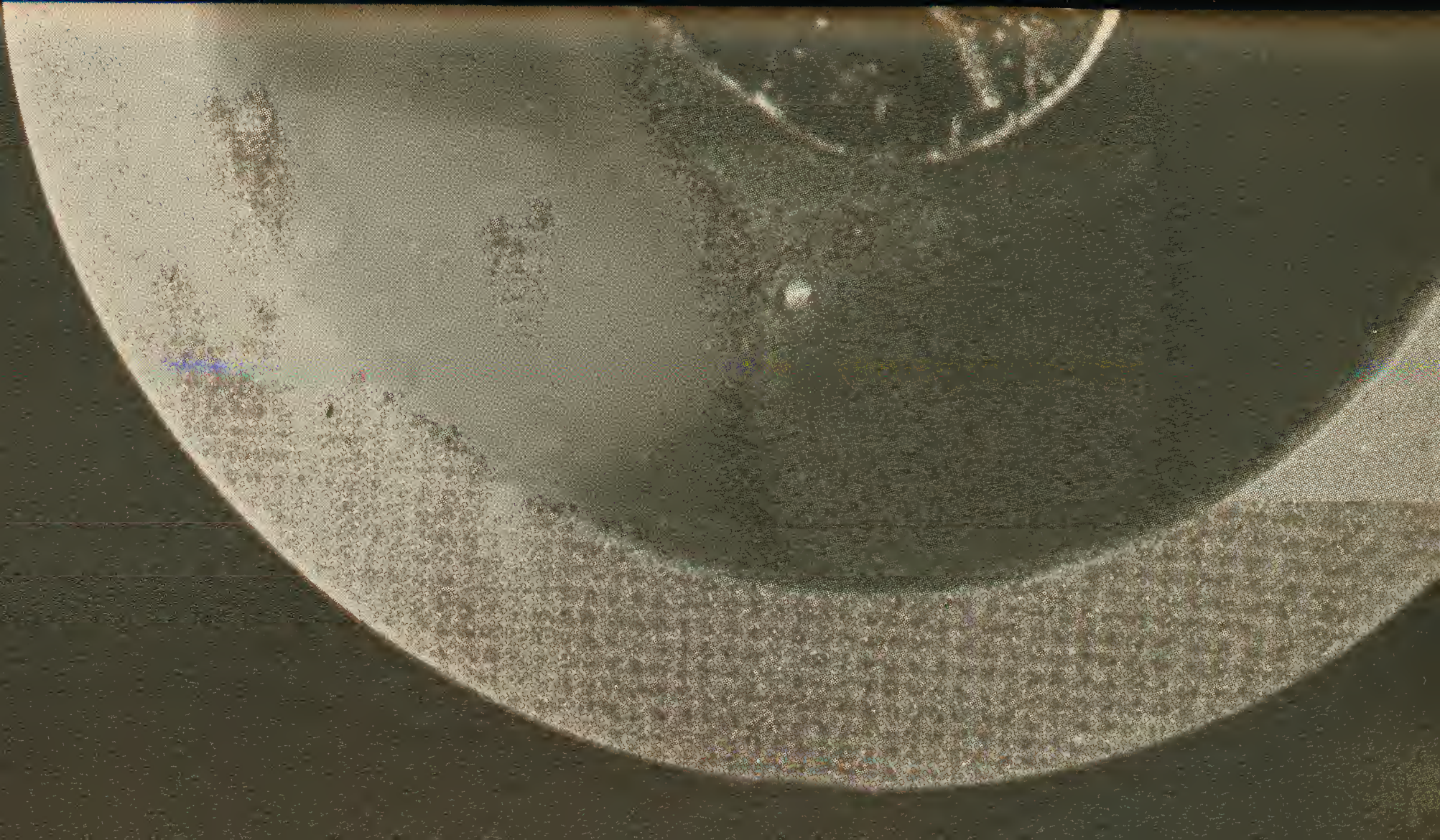
Described herein is the most accurate, scientific, and probably the least costly way to make these decisions correctly.

This booklet offers an opportunity to explore . . .

How Computers Can Be Employed To Make Better Management Decisions About Computers

© COMRESS, INC. 1965





If you now have a computer operation,
you may be asking questions like these:

How to
find the answers
to these and
hundreds of other
complex questions
about data processing?

USE A COMPUTER.

If you are moving to a "third generation" computer,
you must ask questions like these:

. . . and that's exactly
what COMRESS does.

Is our present computer equipment adequate?

How can we increase our computer capacity?

What additional operations can we computerize?

What effect will changes have on our current system?

What hardware enhancement should we consider?

If replacement is in order, what new hardware to select?

What systems design is best for our applications?

Should we consider on-line . . . real-time . . . random access?

What complement of equipment is best for our operations?

Should we re-write or emulate our programs?

Should we purchase or lease?

What programming language should we use?

How to

find the answers

to these and

hundreds of other

complex questions

about data processing?

USE A COMPUTER.

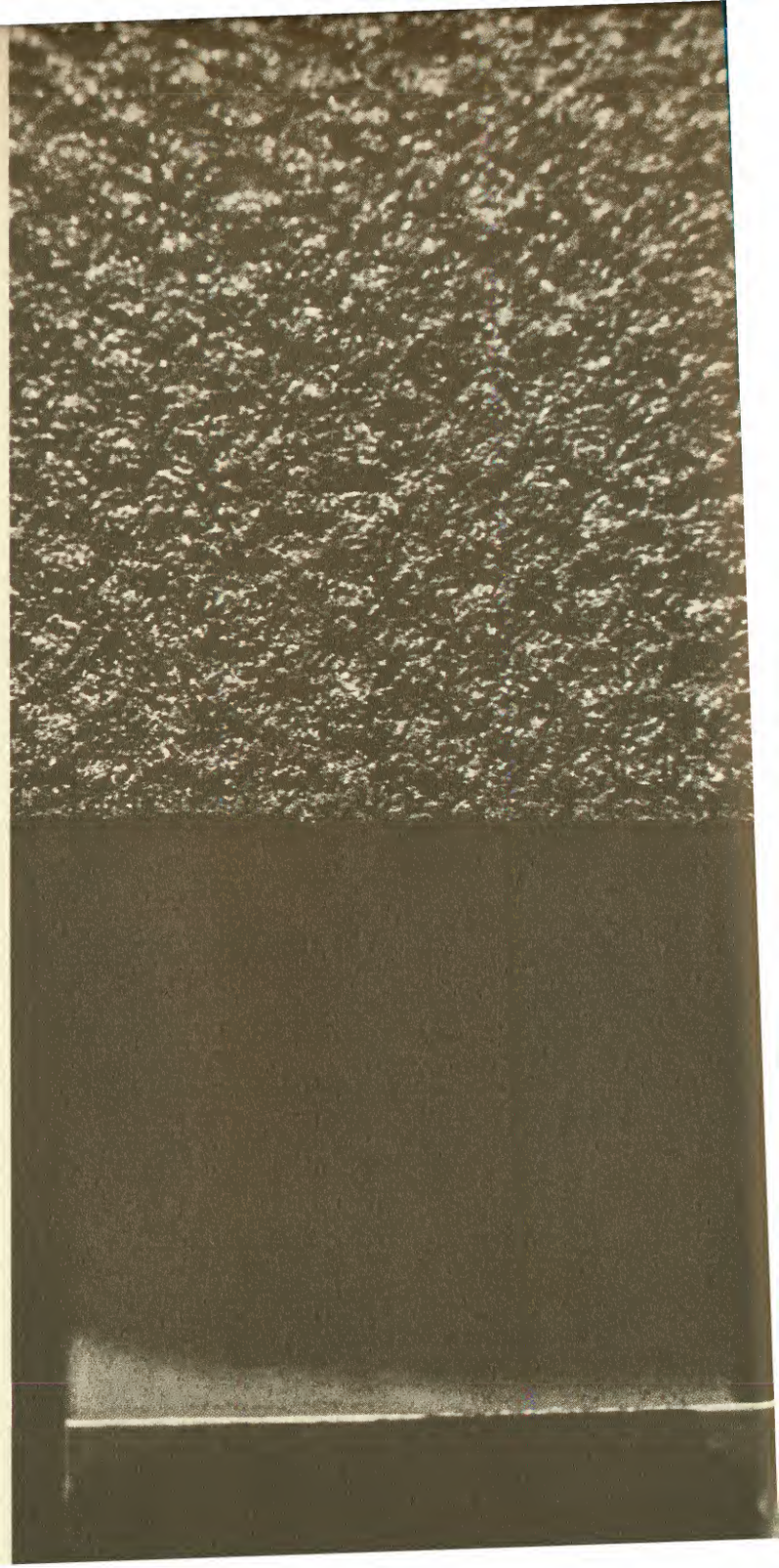
. . . and that's exactly

what COMRESS does.

How COMRESS uses computers to make decisions about computers

The heart of the system developed by COMRESS is a highly successful management tool called **"SCERT"** (**S**ystems and **C**omputers **E**valuation and **R**eview **T**echnique). **SCERT** is an extensive series of computer programs which can simulate the performance of a client's programs against models of computers. These computer models are built from a constantly up-dated tape "library" which contains the hardware and software performance characteristics of all commercially available computer equipment in the United States.

By actively using these and other computer programs as working tools, COMRESS analysts are able to develop a comprehensive fund of information for a client . . . data that can be used for objective, intelligent and timely management decisions on virtually any phase of systems and computer operations. And because COMRESS has the unique advantage of being able to computerize its services, the client gets his answers more quickly, more accurately, and more comprehensively than by any other method.



These clients have benefited from the unique COMRESS approach to computer management.

Allied Chemical Corporation
American Telephone and Telegraph Company
Associated Merchandising Corporation
Bell Telephone Company of Illinois
C.I.T. Financial Corporation
California Department of Motor Vechicles
Canning Associates
Compagnie des Machines BULL (Paris)
Control Data Corporation
Dayton's Department Store of Minneapolis
Department of the Navy
Bureau of Naval Weapons
District of Columbia Government
First Pennsylvania Banking and Trust Company
Flue Cured Tobacco Stabilization Corporation
General Electric Company
General Services Administration (U.S. Gov't.)
Gulf Oil Corporation
Harris Trust and Savings Bank of Chicago
The Hecht Company
Internal Revenue Service
International Harvester Company
Jewel Tea Company, Incorporated
Mellon National Bank and Trust Co.
Midwest Stock Exchange Service Corporation
The MITRE Corporation
Montgomery Ward
National Cash Register Company
Northern Electric Company, Ltd. (Montreal)
Provident National Bank of Philadelphia
Radio Corporation of America
Shell Oil Company
Sinclair Oil Corporation
The Sperry and Hutchinson Company
Turner Manufacturing Company
United Aircraft Corporation
U. S. Air Force, ESD
U. S. Army Data Services Command
U. S. Army Engineers
U. S. Department of Agriculture
UNIVAC, Division of Sperry Rand Corporation
Western Electric Company, Incorporated
Arthur Young and Company

Consider COMRESS accomplishments for some of the above clients on actual problems.....

OIL REFINING COMPANY

Problem: How to increase efficiency of present data processing operations, and determine at what point increased workloads would require equipment upgrading or replacement.

Solution: Results of SCERT simulations showed that some improvement would be possible by enhancing the current system. However, any substantial increase in workloads would require new equipment, and in the long run would be more economical. With this information, the client was able to plan for and order, well in advance, equipment which would be installed in time to cope with the heavier workloads anticipated.

BANKING CHAIN

Problem: To determine the effectiveness of current programs being run on presently installed computers. Also to determine if and where improvement in computer utilization could be attained through re-programming.

Solution: SCERT was used to simulate the bank's programs. The results established a definite and logical priority for re-programming. With this data, the bank is now proceeding in a planned manner to re-program those runs which will yield maximum economies — knowing in advance the costs, time required and what degree of improvement to expect.

BUSINESS INVESTMENT COMPANY

Problem: To insure the feasibility of a proposed systems design for handling combined accounting activities in a number of new subsidiaries; then to evaluate, objectively and accurately, equipment proposed for such a system.

Solution: It was determined that the proposed system was, in fact, feasible. Also, that each of the computers proposed could adequately handle the task. However, using SCERT to simulate the system enables COMRESS to point out the advantages and disadvantages of each of the various vendor proposals, providing the client with sound management information to select the best computer, in terms of their specific problem adaptation as well as dollar value.

CHEMICAL CORPORATION

Problem: Which computer to select . . . one that is compatible with the existing system or one that may offer overall improvements using a different systems approach?

Solution: The present system was first simulated against newer, yet compatible, equipment. Then the system was simulated on a non-compatible configuration which would require re-programming, but promised lower overall costs. COMRESS projections gave detailed technical and management information necessary for objectively comparing the two alternatives. In this instance, the results indicated that moving up to the newer, yet compatible, equipment was the better solution.

GOVERNMENT INSTALLATION

Problem: What could be done on an immediate and long-term basis to solve the problem of equipment saturation, without replacing the current computer system?

Solution: The client's programs were simulated on several different variations of hardware and software enhancement. They were then able to determine that certain equipment enhancements, requiring no re-programming, would provide a great deal of the additional capacity required. Also, the simulation pinpointed that re-programming the input-output package, together with blocking and channel optimization of certain files, would provide the remaining improvement needed to retain the present equipment.

MAIL ORDER HOUSE

Problem: Is the present computer and systems approach adequate to handle future peak loads? If not, can re-programming or systems design enhancement be the answer?

Solution: COMRESS, using SCERT, analyzed, then simulated a large number of present runs and showed that future volume could not be handled on the present equipment. By simulating the same runs on an enhanced computer, it was found that peak loads could be more than adequately handled, and that some re-programming and more optimum blocking of files would provide computer capacity beyond expected future needs.

STATE MOTOR VEHICLE DEPARTMENT

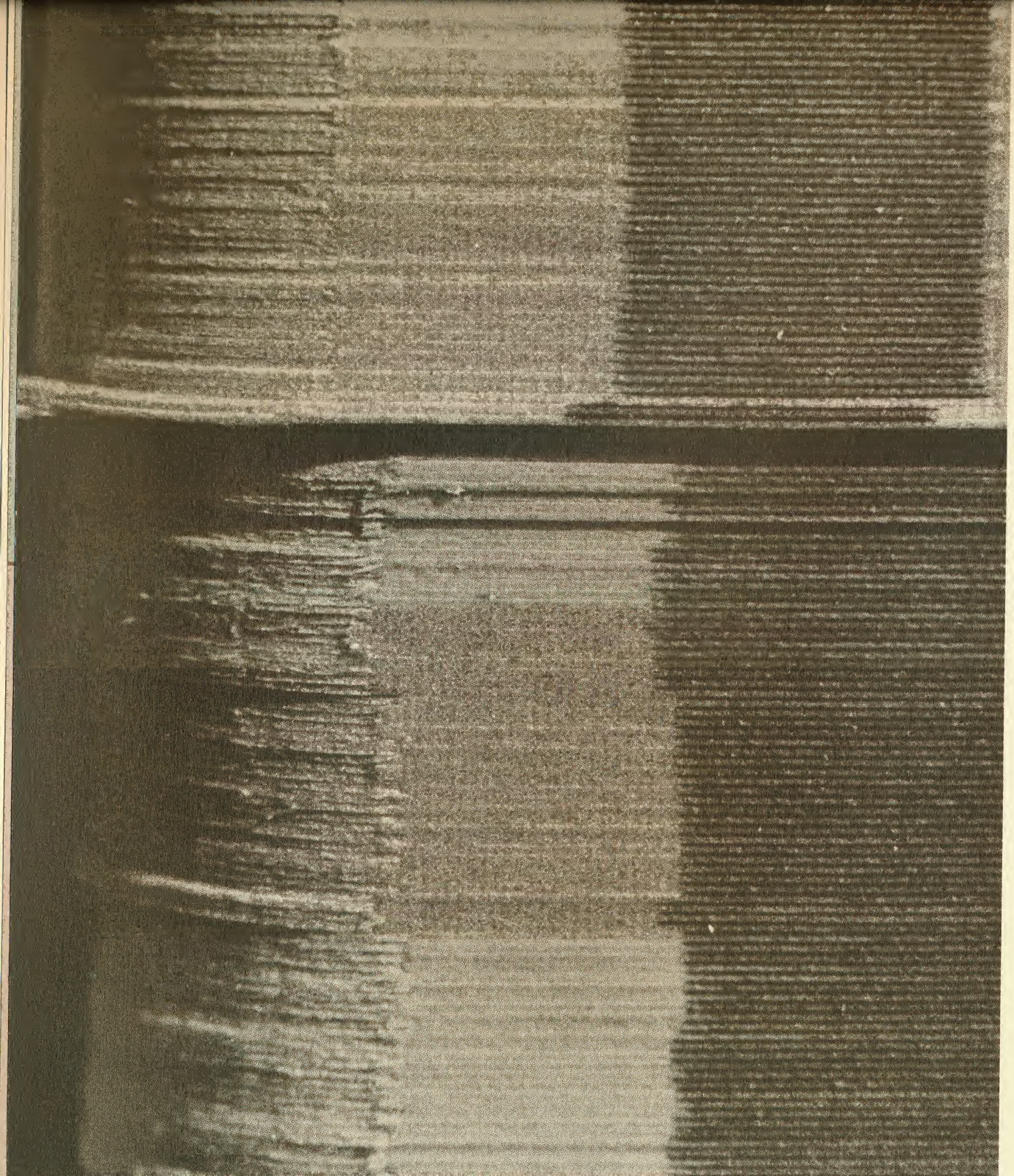
Problem: How to cope with ever-increasing administrative and operational workloads and at the same time improve service to the public, law enforcement agencies, and other organizations requiring vehicle registration and drivers license information.

Solution: A team of highly experienced COMRESS analysts designed a sophisticated on-line, real-time system to accomplish the tasks of the Department; then confirmed its feasibility through SCERT simulations. As a by-product, detailed specifications were prepared for equipment vendors so that accurate proposals could be submitted to the Department. The system was then simulated against the computer configuration proposed by each vendor. Using the already defined system as a basis, the Department could objectively and accurately evaluate, on an equal basis, each vendor's proposal.

MANUFACTURER

Problem: Which computer to select and what systems design approach would be optimum for the data processing objectives of this organization?

Solution: COMRESS analysts designed an efficient, workable system for the client, then simulated this system against several possible computer configurations. The resulting reports gave management the ability to make realistic comparisons of how each computer would perform for their specific system. This enabled the client to avoid the disaster of not choosing the proper hardware to accomplish specific objectives.



COMRESS takes the guesswork out of computer decisions

for all types of data processing

. . . business

. . . scientific

. . . real-time and communications

and for these computer methods

. . . sequential

. . . random access

. . . multi-processing

. . . multi-programming

. . . or for any combination of them.

Using a computer, COMRESS can furnish management with services —

— to determine the effectiveness of present computer programs

Comparative simulations can yield information to measure the efficiency of your current programs and operations, and to outline ways improvements can best be accomplished.

— to design computer systems

COMRESS analysts can define (or design) and simulate various systems to find that which will function at the least cost and with the highest performance efficiency.

— to select computer equipment

SCERT simulations of each different computer being evaluated, furnish the data essential for accurate, objective and timely decisions.

— to select programming software

COMRESS uses SCERT to simulate your programs as if written in COBOL, FORTRAN, ALGOL or other languages. Data produced enables the client to relate the effectiveness of programming to the efficiencies of running time.

— to decide on enhancing present equipment

By simulating variations of the client's computer configuration, COMRESS can determine the benefits of computer enhancement.

— to design a computer

For the creative approach to data processing, COMRESS can even build a mathematical model of a computer that doesn't exist, simulate program runs on it, project its efficiency, and its applicability to proposed system requirements.

The time-saving COMRESS way of working with a client:

The relationship begins when a COMRESS representative sits down with the client to discuss the problems to be solved. Out of this comes a contract proposal, outlining the services COMRESS will accomplish — how much it will cost — when it will be completed.

A COMRESS team is assigned to the project . . . with one senior analyst designated to work closely with the client. He provides a pre-definition form to the client's computer department as the initial tool to detail the areas for evaluation. In approximately three days, meeting with members of the client's technical staff, the COMRESS analyst obtains the basic data for defining the elements of the client's system.

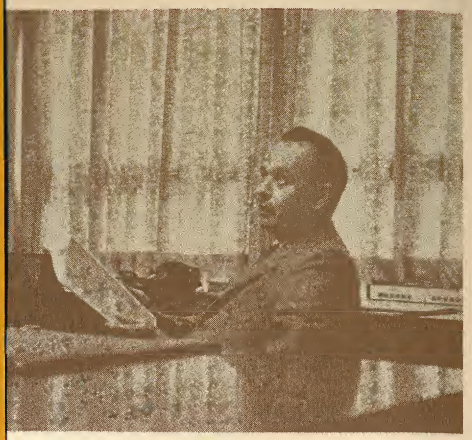
At the COMRESS Technical Center these definitions are finalized, reviewed and checked to validate the data, then SCERT — the most important member — joins the team. Using SCERT, COMRESS analysts proceed with the necessary simulation computer runs, and assemble the pertinent reports.

With written interpretation and analysis, the senior analyst returns to the client. He makes a full presentation to management, relating the results of the analysis specifically to the decisions to be made at the executive level. Then makes a second presentation to the technical staff, covering the detailed data for solving the problems originally stated.

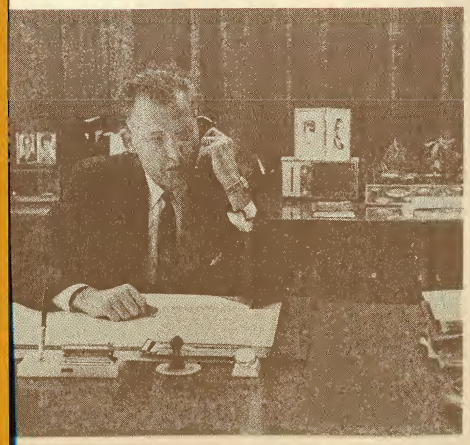
Both management and operations are now in a position to move ahead confidently to accomplish their data processing objectives. And they have the additional advantage of being able to come back to COMRESS for follow-up simulations, further reviews, future research into their computer system requirements.

In any given COMRESS project there is minimum inconvenience to the client. No protracted meetings that tie up important members of his operating staff. No interruption of the work flow in data processing. No need to use client's equipment. And, because the COMRESS analyst, using SCERT, is probably equivalent to five or six consultants, there is no task force of "evaluators" to cope with.

The entire process — from problem definition to problem solution — takes, on the average, only four to five weeks. And the cost? Often less than one month's computer rental.



Fred C. Ihrer
Executive Vice President
Technical Director



The growth of COMRESS, Inc. . . .

. . . testifies to the value and competence of its services. Starting with a few accounts back in 1962, its business is now national and international. A European client generates the SCERT reports in seven languages. Customers include a wide variety of private industries, computer manufacturers, federal agencies and state governments.

Underlying the COMRESS growth philosophy is the conviction that the need for advanced management techniques in data processing represents a vast potential for using computers to make decisions about computers. The COMRESS approach is to develop programs which can assist in data processing management. These programs are in various stages of research, development, operating under field test, or are now completely operational . . . such as SCERT.

The idea for these management programs was originally conceived by Fred Ihrer and Don Herman, both technical executives in the data processing field. They began on SCERT, and developed it over a period of several years with help from others who are now on the staff of COMRESS. When it was ready for use in April of 1962, the company was incorporated.

With SCERT as the catalyst, COMRESS has moved to the forefront in the use of simulation techniques for solving data processing problems. Its growth in facilities, staff and variety of clients gives it a versatility to perform a wide range of services, not only in computer analysis, but extending into the areas of systems development, software development, management consulting, and technical training.

Donald J. Herman
President

Fred C. Ihrer
Executive Vice President
Technical Director

B. G. Anderson
Executive Vice President
Marketing and Administration

Let COMRESS use its computers to take the guesswork out of YOUR computer decisions.

COMRESS, Inc.
2120 Bladensburg Road, N.E.
Washington, D. C. 20018
Area Code: 202 529-0360

Paris **Los Angeles** **Chicago**

Let us take the guesswork out of our illustrations

Here's a key to the macro-photographs (super-sized pictures of small objects) used to illustrate this brochure, in order of their appearance:

1. Rollers on magnetic tape unit. 2. Error lights on punch card collator. 3. Key punch "on" switch. 4. Edge of tape reel, with sponge safety pad inserted. 5. Stack of punch cards. 6. Single plug in plug board. This equipment, in its normal perspective, is shown as part of the montage on previous page.

COMPUTER RESEARCH, SYSTEMS AND SOFTWARE

COMRESS

January 13, 1966

Mr. T. Nelson
Box 1546
Poughkeepsie, NY 12603

2120 BLADENSBURG RD., N.E.
WASHINGTON, D.C. 20018
Phone: 202 529-0360

Dear Mr. Nelson:

Thank you for your response to our advertisement in the November 1965 issue of Data Processing Magazine.

Enclosed is the brochure you requested, which describes the unique success of COMRESS in "taking the guesswork out of computer decisions." It offers an explanation of how we use computers to comprehensively and precisely simulate other computers--and in so doing are able to help management solve many of the problems of data processing activities.

Through the use of our series of proprietary programs known as SCERT (Systems and Computers Evaluation and Review Technique), COMRESS can simulate an extensive variety of data processing alternatives... and develop analytical reports on virtually every phase of data processing and related systems management.

The brochure, of course, is general in describing the capabilities of this technique. Obviously, it could not be oriented to the specific requirements of a particular system. But it does provide accurate background on COMRESS, the SCERT series of programs, and the services that are available to you.

It would be very much appreciated if you could take a few minutes to write us about the specific areas of our service where you have the most interest. A long explanation is not necessary, only a few details on what sparked your original inquiry, or in what phase of computer management you feel SCERT may be of use to you.

If you have specific questions, please do not hesitate to pass them along. We will appreciate the opportunity of answering them and providing detailed information as to how we might offer help for your requirements.

I will look forward to hearing from you.

Sincerely,

B G Anderson

B. G. Anderson
Executive Vice-President, Marketing

Enclosure

PDP-8 SOFTWARE

BY INDEPENDENTS